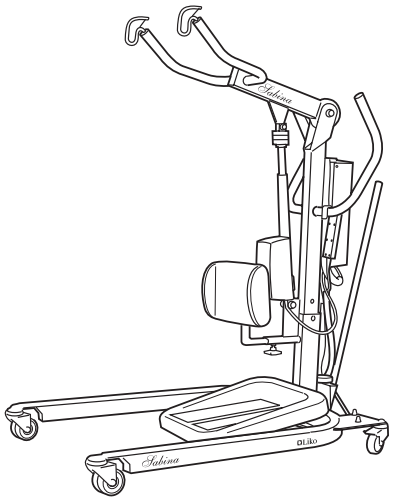
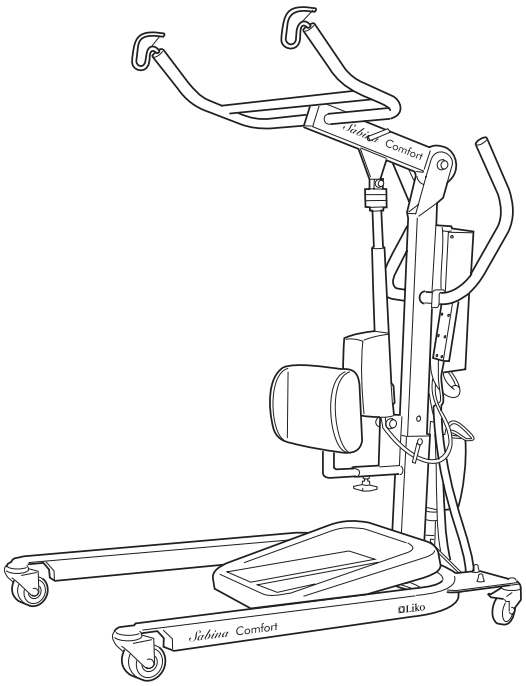
Liko

Instruction Guide

7EN55103
2000-08-18





Sabina Model EM/ES
Sabina Comfort Model EM/ES

Sabina is a sit-to-stand lift especially designed for patients who are able to actively participate in the standing exercise, for example when transferring to the toilet.

Sabina and Sabina Comfort can be used for physiotherapy to help the patient activate the muscles needed for standing up and putting weight on their legs and feet.

Sabina Comfort in combination with Liko Comfort Vest offers extra ease and comfort in lifting, particularly for users who are sensitive to pressure under the arms. This makes it especially suitable for people who are paralysed on one side.

To a limited extent both Sabina and Sabina Comfort may also be used, with certain models of the regular Liko slings, to transfer patients who are unable to actively participate.

△ **”Caution!” triangles are used to warn of situations that demand extra care and attention.**

⚠ **CAUTION!**

Carefully read these instructions and the instructions for the particular lifting accessory being used. Lifting and transferring patients always presents a potential risk. It is essential to thoroughly understand the content of these manuals, and that only trained persons use the equipment.
If you have questions, please contact Liko or your local Liko representative.

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Safety Instructions

△ **Before using *always* make certain that:**

- the lift is assembled as the instructions says.
- the safety split pin or nut is securely fastened in the bolt that holds the sling bar or other accessories.
- all manuals have been carefully studied and fully understood.
- persons using the equipment have received appropriate instructions and training.
- all lift components, material, and seams are intact and show no signs of damage or wear.
- that in each individual lifting situation you have selected the correct type, size, material, and design of slings and accessories to safely meet the user's needs.

△ **Never leave a user unsupervised in Sabina/Sabina Comfort!**

CE VERIFIED EMC SEMKO

Sabina EM/ES and Sabina Comfort EM/ES are classified as a medical technical product Class I.
Sabina EM/ES and Sabina Comfort EM/ES comply with the requirements according to IEC 60601-1.
Sabina EM/ES and Sabina Comfort EM/ES comply with the EMC requirements according to IEC 60601-1-2.
Sabina EM/ES and Sabina Comfort EM/ES comply with the requirements according to EN ISO 10535.

Radio transmitting devices, mobile telephones, etc, should never be used near the lift since they can interfere with the function of the lift.

Particular care must be taken when using strong sources of potential disturbance, such as diathermy, etc, so that cables are not positioned on or near the lift. If you have questions, please consult a biomedical engineer or the supplier.

△ **Maximum load: 200 kg (440 lbs.)**

Technical Specifications

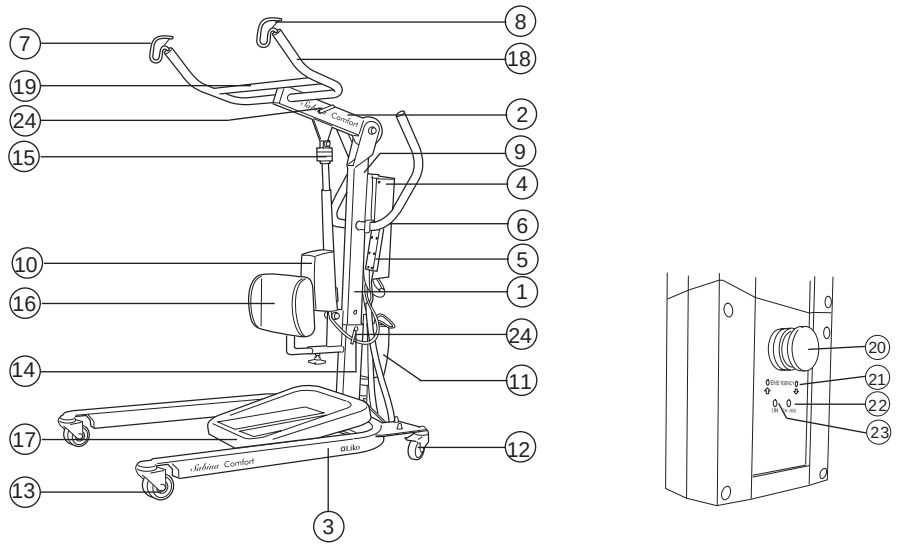
Batteries: Two 12V 2.9 Ah valve regulated leadacid batteries. New batteries are provided by the supplier.
Motor (mast): 24 V, 6 A, manufacturer Linak, permanent magnetic motor with mechanical safety mechanism and safety nut.
Motor (base): 24 V, 3.5 A, manufacturer Linak, permanent magnetic motor.
Charger: Built-in charger, 100-230 V, 50-60 Hz, max 400 mA .
Material: Painted steel with laquer top coat.
Emergency Lowering: Mechanical (pats.pend.) and electrical.

Footrest: Removable.
Kneepad: Height and width adjustable. Removable.
Intermittent operation: Int. Op 10/90, active operation max 6 min. Out of a time of 100, active must be less than 10, however not more than 6 min.

IP class 43

Built for indoor operation.
Type B according to the degree of protection against electric chock.
Class ll equipment.

Product Information

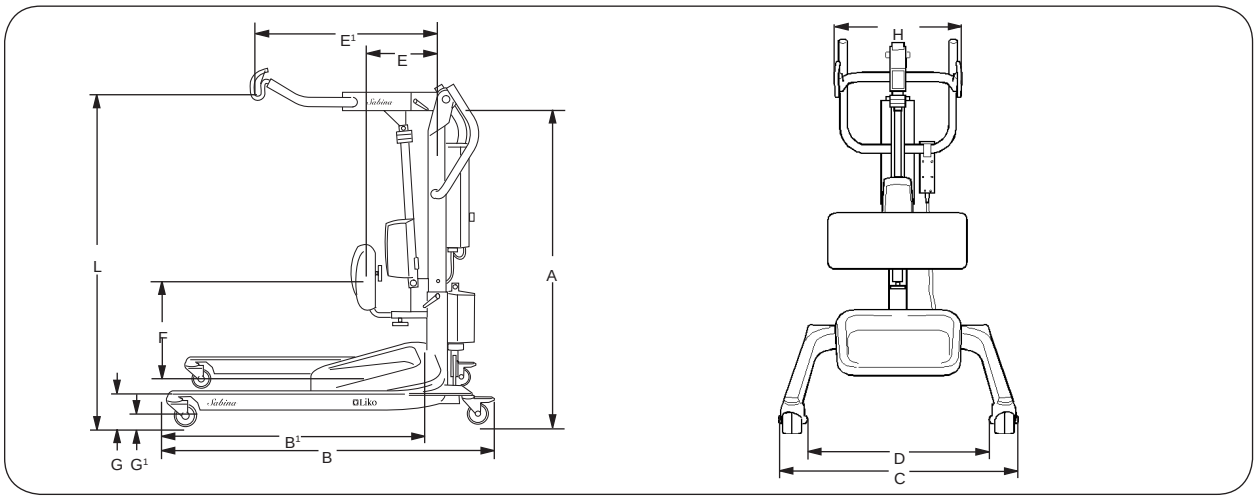


Positions:

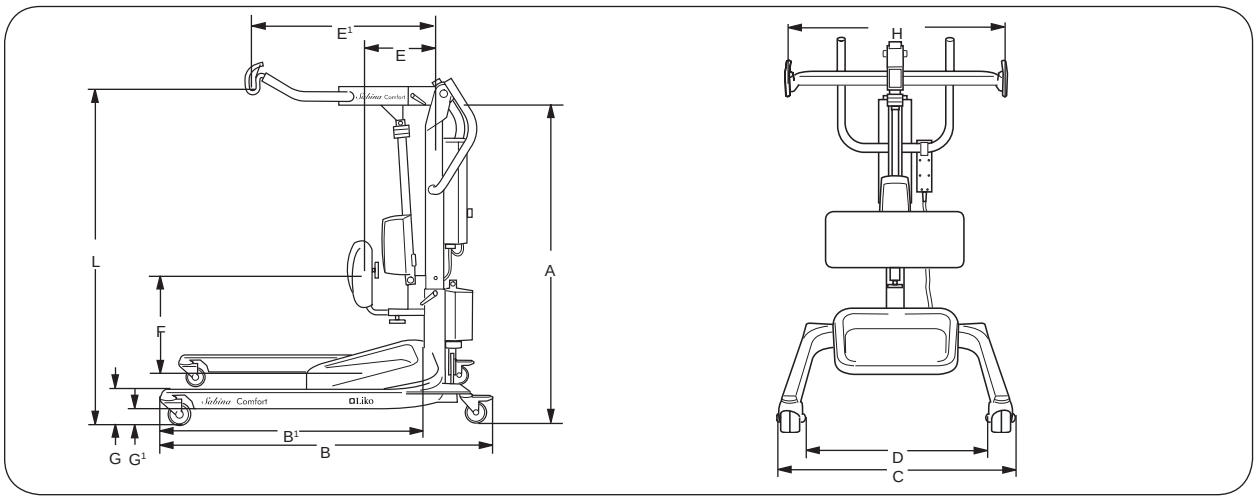
1. Lift assembly
2. Overhead beam
3. Base
4. Batteries
5. Hand control
6. El.Power Pack with emergency stop
7. Lift hook
8. Safety latch
9. Label
10. Motor; height adjustment
11. Motor; base width adjustm.
12. Rear wheel with brake
13. Front wheel
14. Cable - handcontrol
15. Emergency lowering
16. Adjustable kneepad
17. Footrest - detachable
18. Sling Bar
19. Cross Bar (Comfort only)
20. Emergency Stop
21. Electrical emergency lowering/raising
22. Indicator lamp for charging (Charge)
23. Indicator lamp for charging (ON)
24. Locking handle (2 positions)

Dimensions

Sabina EM/ES



Sabina Comfort EM/ES



Model	Capacity	L* Max	L* Min	A* Max	A* Min	B	B1	C	D	E	E1 (max)	F	G**	G1	H Tot	Weight Del		Turning-diameter
Sabina	200	172	81	110	100	106	86	69-105	53-90	21-30	65	30-40	11-15	5	35	44	19	118
Sabina Comf.	200	172	81	110	100	106	86	69-105	53-90	21-30	65	30-40	11-15	5	60	44	19	118

Capacity and weight in kg. Measurement in cm.
** These measures depend on in which hole the mast is levelled and secured. (See assembly instructions page 6)*
*** 11 cm is standard setting. 15 cm is when using 100 mm wheel diameter.*

Model	Capacity	L* Max	L* Min	A* Max	A* Min	B	B1	C	D	E	E1 (max)	F	G**	G1	H Tot	Weight Del		Turning-diameter
Sabina	440	69	32	44	40	42	34	26-42	21-36	8-12	26	12-16	4-6	2	13.8	98	42.5	46
Sabina Comf.	440	69	32	44	40	42	34	26-42	21-36	8-12	26	12-16	4-6	2	23.6	98	42.5	46

Capacity and weight in lbs. Measurement in inch.
** These measures depend on in which hole the mast is levelled and secured. (See assembly instructions page 6)*
*** 4 inches is standard setting. 6 inches is when using 100 mm wheel diameter.*

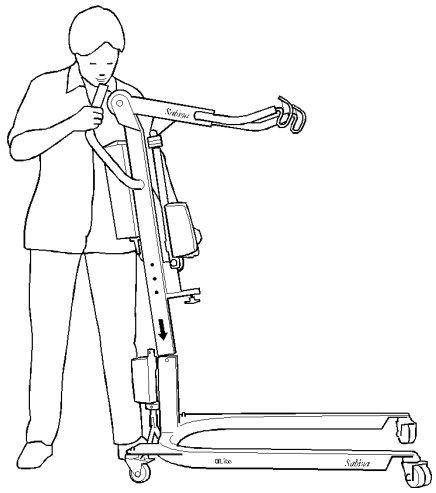
Assembly Instructions

Before assembling, check that you have the following parts and tools:

- Lift assembly and overhead beam.
- Base with motor for width adjustment.
- Hand control with cable.
- Tools: Wrench 17, (2)
- Connection cable for charging.
- Battery.
- Frame for the footrest and footrest.
- Kneepad.
- Lever for base-width adjustment (mod EM).

After assembling, check the following:

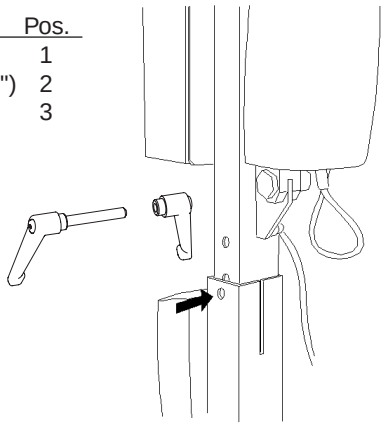
- Check that the lifting motion as well as the width adjustment of the base coincides with the indicators on the hand control.
- Check that the emergency lowering device functions properly.
- Check the wheel brakes.
- Check the battery charge.
- Check that the LED lamps on the charger lights when charging.



Individual adjustment of lifting height

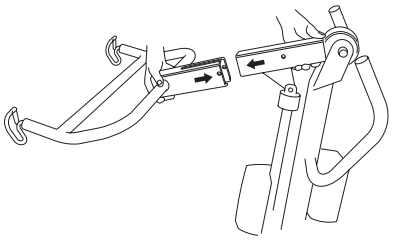
Best position:

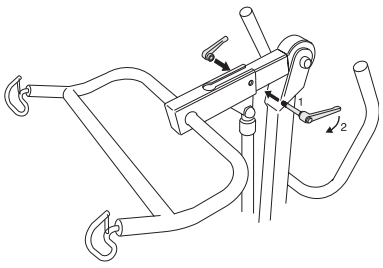
User's height	Pos.
< 170 cm (<5'7")	1
160-190 cm (5'3" - 6'3")	2
> 180 cm (>6 Ft.)	3

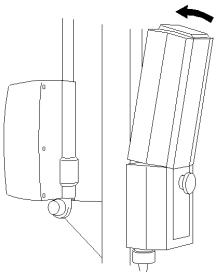


1. Lower the mast into the pipe on the base as shown in the picture.

2. When securing the mast to the base, you have the option of setting the liftspan in *three different levels*. Choose one of the three holes to secure the mast to the base. The distance between two holes is 5 cm (2 inches). Use locking handles or screw M10x60 and lockingnut M10. Tighten with tool if you use screw and nut.



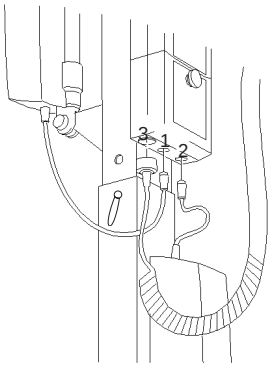


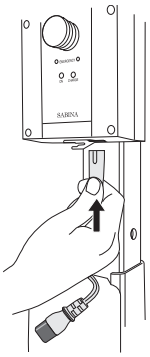


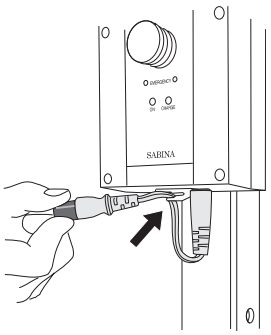
3. Push the sling bar forward on the lift arm with the hooks opening upwards.

4. Mount the locking knob and tighten

5. Place the removable battery-pack into position on top of the electronic power pack. Check that the batterypack is locked to the assembling part.
A "click" sound will be heard.



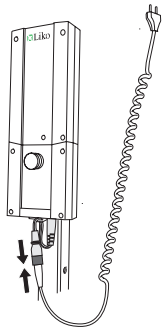


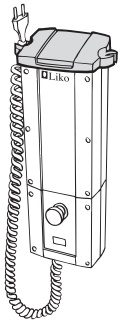


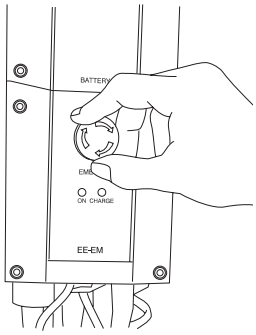
6. Connect the cables as follows:
- Mast motor cable to socket number 1
- Base motor cable to socket number 2 (not model EM).
- Hand control cable to the socket farthest to the left on the electronic power pack (number 3 in the diagram).

7. Connect the extension cable for the charging cable to the control box

8. Insert the extension cable in the tension clip underneath the control box.



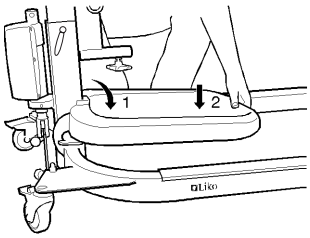


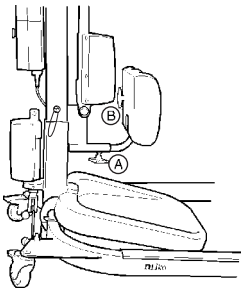


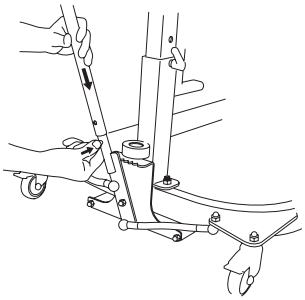
9. Connect the charging cable to the extension cable.

10. Mount the holder for the charging cable. Hook it on the outer edge and press down until you hear a click.

11. Reset the emergency stop by turning the button in the direction shown by the arrow on top of the button.



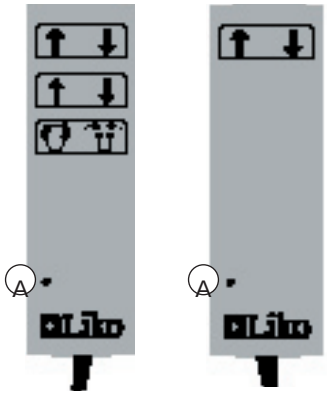




12. (1) Place the footrest over the base of the mast as shown in the illustration. Check to see that the brackets are correctly aligned.
(2) Check to see that the plastic footrest is pressed down and in a stable position over the foot rest frame.

13. Place the brace for the kneepad into the bracket on the mast. Use knob A to adjust the depth, i.e. the distance to the user's knees.
Adjust the height of the kneepad and turn knob B to lock the kneepad in place. Tighten the knobs securely after making these adjustments.

14. Mount lever for base-width adjustment (mod. EM):
- Press in the catch on the undercarriage.
- Slide lever into place.
- Turn the lever until it clicks securely in place on the undercarriage.



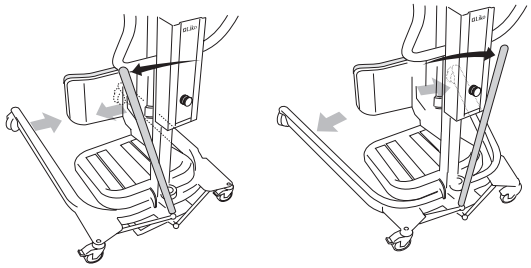
Maneuver

Maneuver the lift using the pushbuttons on the hand control. Directional arrows show the direction of movement (up/down). Bigger arrows means faster movement. The lift stops when you release the buttons.

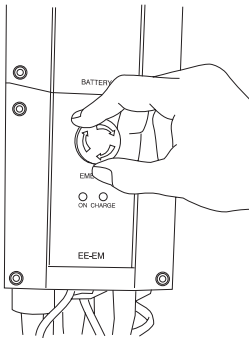
The base width is adjusted by pressing either of the two lower pushbuttons.

out

in

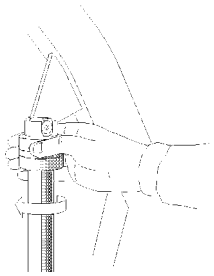


The base width of the lift model EM is manually adjusted by a lever. The lever can be put in different positions.
Move the lever backwards to unlock it, then move it sideways to adjust the width. The lever locks automatically.
If the battery needs charging, a LED lamp (A) is lit on the handcontrol. There is however enough capacity left in battery for several lifts.

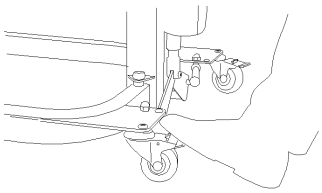


Emergency Stop
To use the Emergency Stop:
Push the red Emergency Stop button.
To reset: Turn the button in the direction shown by the arrows.

Electrical Emergency Lowering
For electrical emergency lowering/rising, use a thin object and press into the hole marked on the power pack.
△ **The object used to press must not be too sharp!**



Mechanical Emergency Lowering
To use the Emergency Lowering:
Turn the red Emergency Lowering cylinder in the direction shown by the arrows.



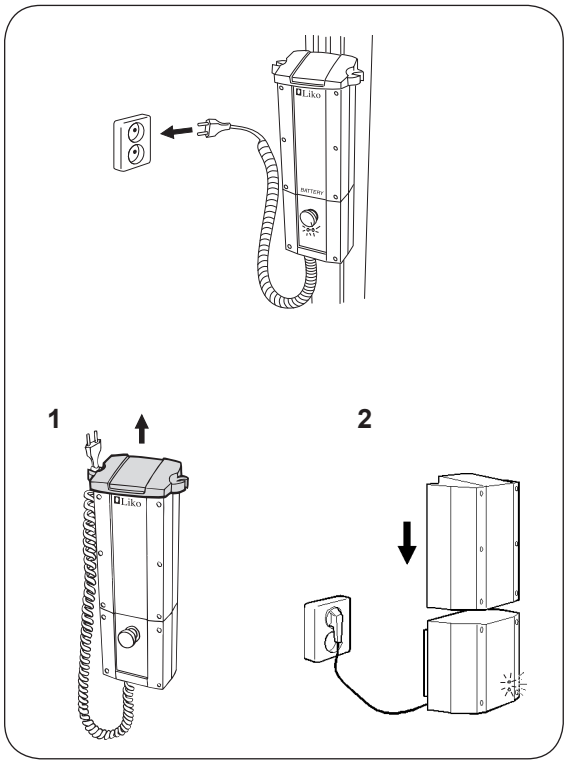
Locking the wheels
If necessary, the rear wheels can be locked.
To lock, step on the foot brake.
To release the brake, press the upraised release mechanism.

Charging the batteries

To obtain maximum life of the batteries it is important that they are being charged regularly.
We recommend charging every night after using the lift. Check that the emergency stop button is not pushed in. The battery charges fully in 6 hours. The charger shuts off automatically once the battery is fully charged. Charging must not take place in a wet area.

If the lift is not used daily, we recommend that you press in the emergency stop. This cuts the electrical current and saves battery power.

△ **NOTE!** During charging, an indicator lamp on the control box illuminates, see page 4, position 22. When the batteries are fully charged, the lamp shuts off. If the indicator lamp continues to light after 8 hours, the batteries probably need to be replaced. Discontinue the charging and change the batteries.



Alternatives of charging

With built-in charger:

Take the coiled cable and plug into the socket (100-230V~)
Check that the LED lamps on the electronic power pack lights which indicates charging.

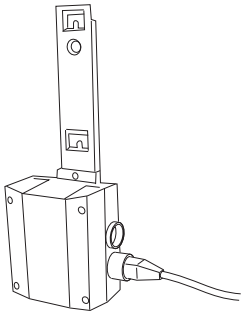
With wallmounted charger:

1. Loose the holder for the chargercable
2. Remove the battery from the electronic power pack and place this on top of the wallmounted charger.
   Check that the charger is plugged in to the socket and that the lamp on the front of the charger lights when charging.

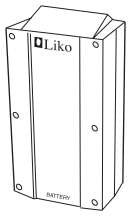
Pb

Old batteries are to be left at personal authorised by Liko, or to the nearest station for environmental recycling.

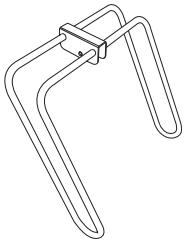
Accessories for Sabina and Sabina Comfort



Wallmounted charger,
prod. no. **2004106**



Extra batterybox incl. batteries,
prod. no. **2006106**



Sabina sidesupports,
prod. no. **2027100**

Using Sabina and Sabina Comfort in lifting and sit-to-stand situations

Accessories

Different accessories are available for Sabina and Sabina Comfort.
Study the instructions for use of accessories carefully.

In most cases, one of Liko's sit-to-stand vests is used.
We recommend the following combinations:

- **Sabina** Liko SupportVest or Liko SupportVest for raising
- **Sabina Comfort** Liko ComfortVest

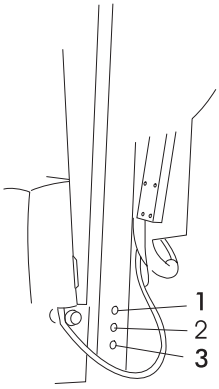
To a limited extent, Sabina and Sabina Comfort can be used for passive lifting of a user who is lifted in a sitting position in a sling. An individual test is necessary.
We recommend one of the following sling models that does not restrict the lifting height:
- For Sabina Liko Original Sling (arms out), Liko HygieneSling, LikoStraps
- For Sabina Comfort Liko Universal Sling, Liko Original Sling

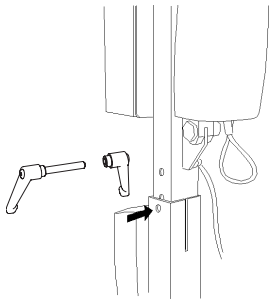
Study the instruction guides for the sling and check to ensure that the sling that is to be used matches the width of the sling bar. In this case, Sabina's sling bar is comparable to Liko Sling Bar Slim 350 and Sabina Comfort with Liko Sling Bar Wide 670.
For Sabina / Sabina Comfort, a Side support is available (see page 9). The Side support is intended for sit-to-stand lifting of users with limited lateral stability.

Adjustment lifting height

Individual adjustment of lifting height
Best position:

User's height	Pos.
< 170 cm (<5'7")	1
160-190 cm (5'3" - 6'3")	2
> 180 cm (>6 Ft.)	3

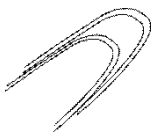




The user is unable to rise to a sufficiently upright position. What can be done?

Sometimes this is due to the user's physical status; weak musculature, poor tone and/or contractures in hips and knee. To use Sabina in the best possible way, follow these steps:

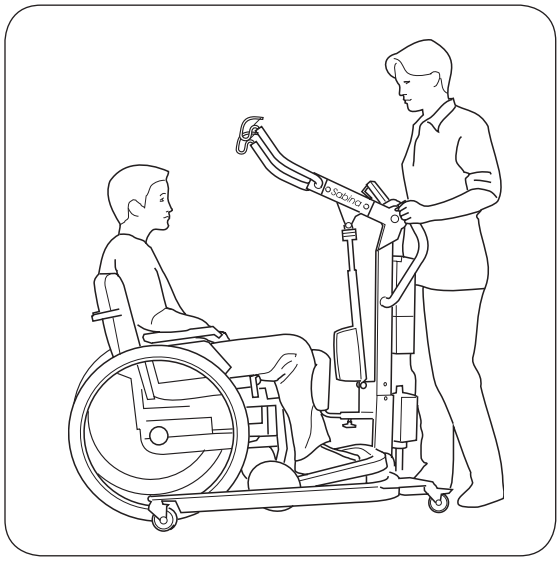
1 Hook the vest to the hook in the shorter loop (B) instead of the longer loop.



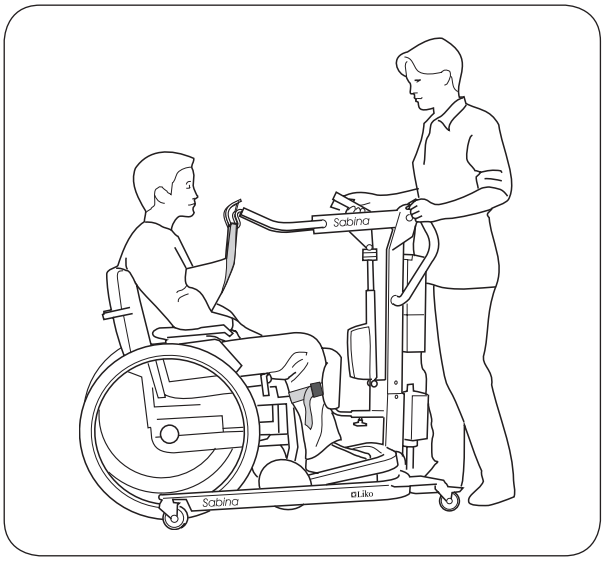
2 Raise the mast in Sabina's base.
See *Adjustment lifting height*, above.

3 Try a smaller sized vest. A smaller size means shorter distance to the hooks, which results in a more upright standing position.

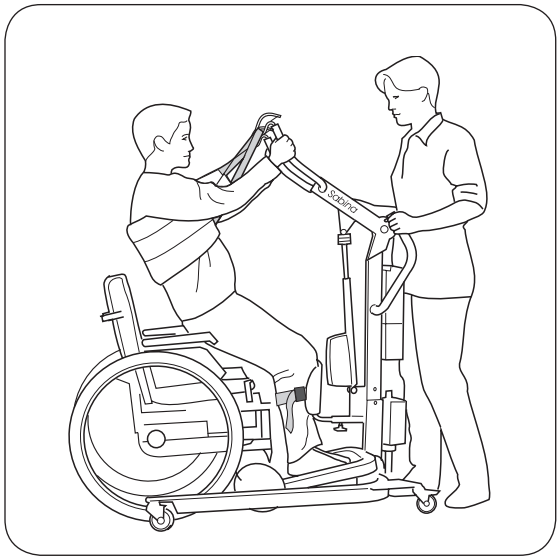
Sit-to-stand lifting with Sabina, with the active participation of the user



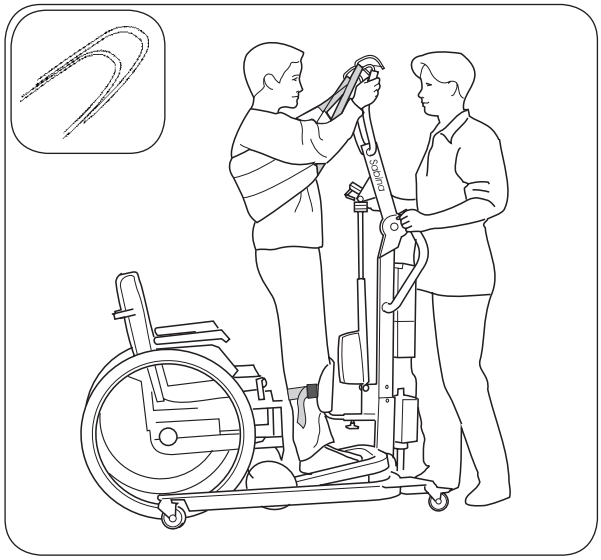
1. Place Sabina in front of the user and adjust the width of the undercarriage so that the feet can be placed centrally on the foot-tray with the shins parallel to the lower-leg supports. Adjust lower-leg support height and depth against the shins so as to achieve a comfortable resistance under the kneecap.



2. Place the sit-to-stand vest around the user according to the instructions for that particular vest.



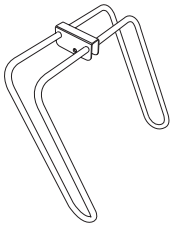
3. Raise Sabina about 10-20 cm (4-8 inch.) The user grasps the crossbar and the lifting procedure can continue. If the user leans backwards during the lift, this facilitates lifting and prevents the vest from sliding up. The height to which the user is to be lifted must be decided and tested in each individual case.



4. To achieve a more upright position, continue the lifting motion to the uppermost position. The lifting procedure may seem unpleasant for those who are unaccustomed to it. Remember that Sabina has two speeds. For maximum comfort, the mast must be locked into the base in the best possible of the three alternative holes. See page 6, illustration 2.

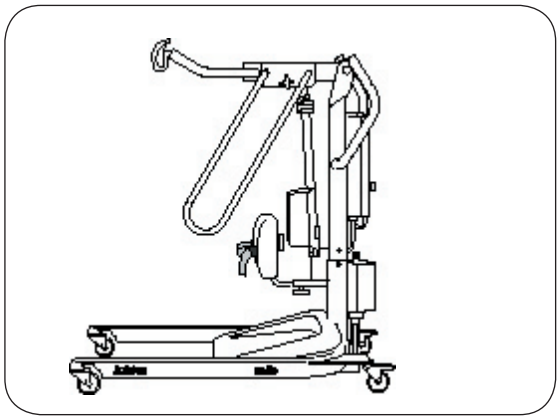
△ Make sure the vest's loops are correctly fastened when the straps are fully extended, but before the user is clear of the seat.

Sit-to-stand lifting with Sabina and side support, with the active participation of the user

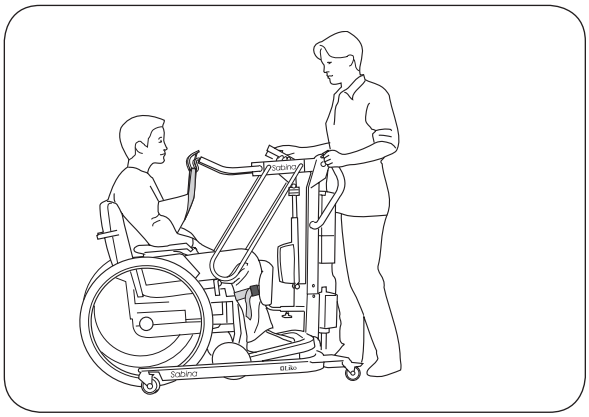


Side Support, Prod. no. 2027100, is an accessories for Sabina.
Side support is intended for users with poor lateral stability.

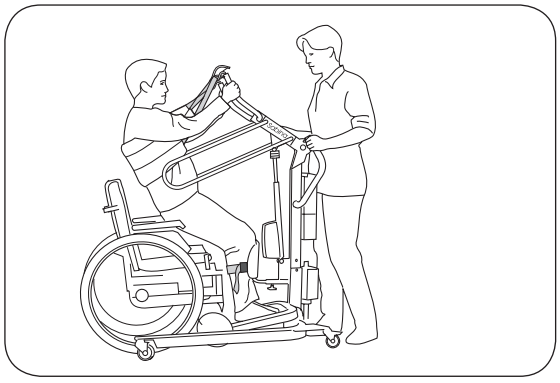
Follow the instructions on the previous page. This page contains further information.



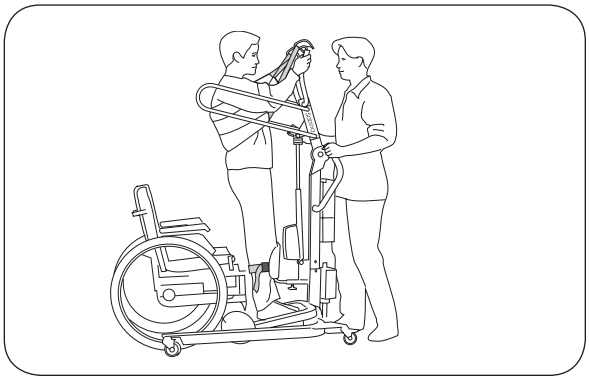
1. Mount Side support on Sabina with support arms directed towards the user. Secure with screw and wing-nut M8.



2. Place the sit-to-stand vest around the user according to the instructions for that particular vest.



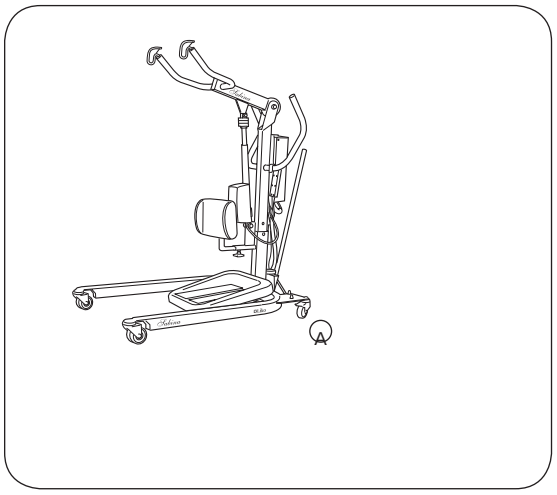
3. Raise Sabina about 10-20 cm (4-8 inch.). The user grasps the sling bar and the lifting procedure can continue. If the user leans backwards during the lift, this facilitates lifting and prevents the vest from sliding up. The height to which the user is to be lifted must be decided and tested in each individual case.



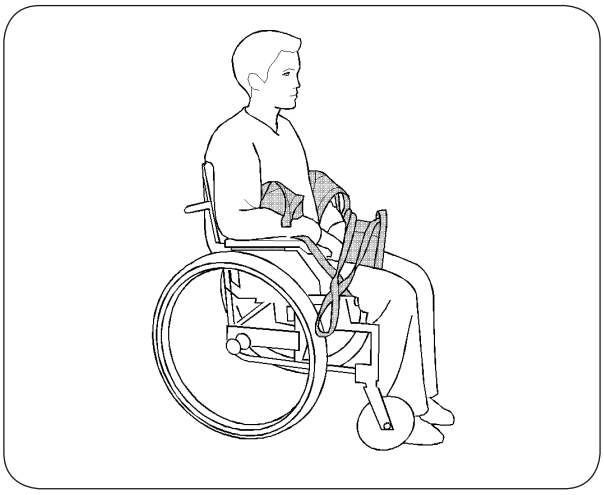
4. Continue lifting to desired height.

△ Make sure the vest's loops are correctly fastened when the straps are fully extended, but before the user is clear of the seat.

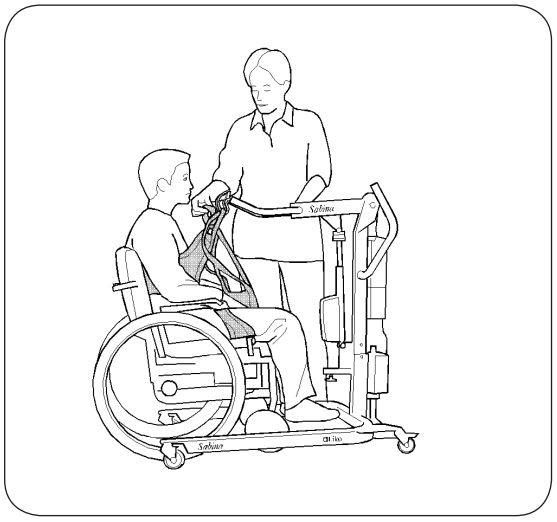
Passive lifting from a sitting position with Sabina or Sabina Comfort



1. Disassemble kneepad: loosen screw A and pull it out. Remove foot-tray: Grasp front edge, bend up and lift foot-tray away from base.

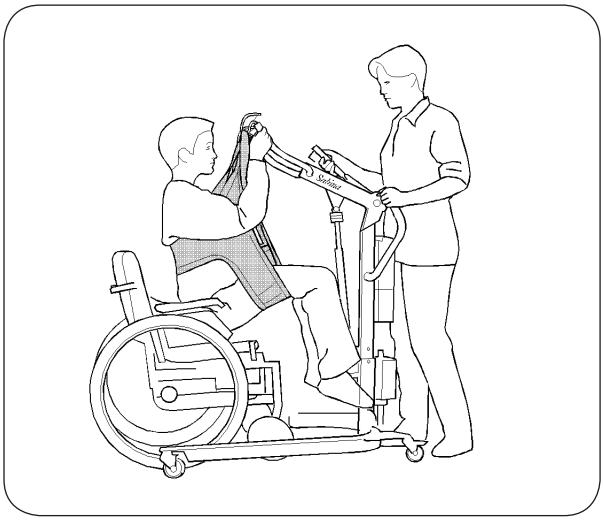


2. Apply an appropriate sling, see page 10. Follow the instructions for that particular sling.



3. Move lift forward. Hook sling loops to lift arm hooks. Lower the lift arms if they are too high.

△ Make sure the vest's loops are correctly fastened when the straps are fully extended, but before the user is clear of the seat.



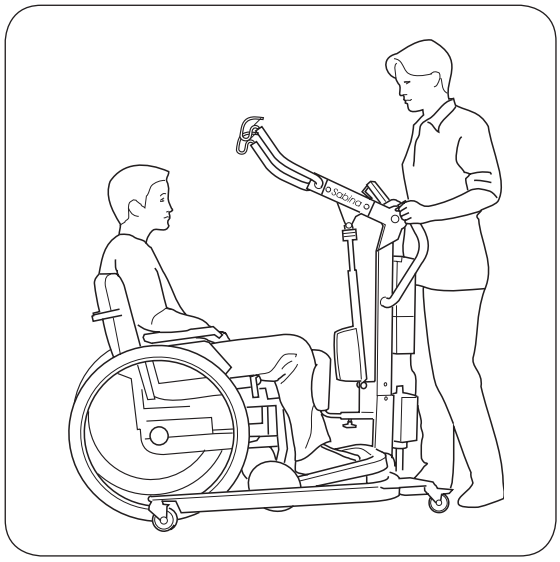
4. Raise sling bar to the minimum height necessary to achieve the transfer.

△ Do not lift the user so high that he or she comes too close to the lift mast.

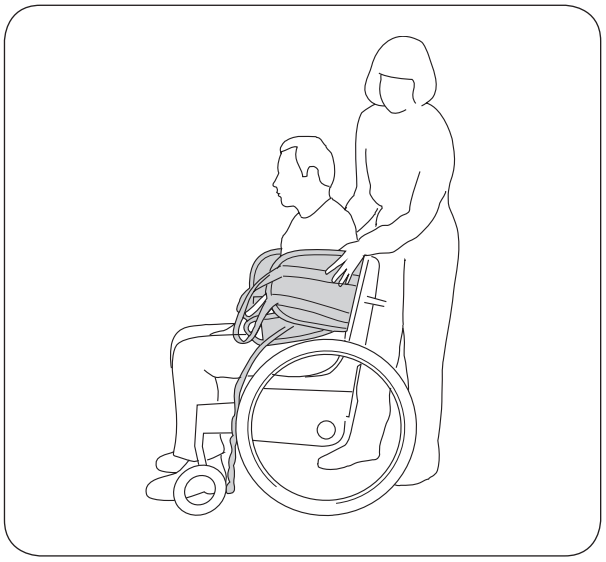
△ *NOTE!*

This method of lifting sitting users with Sabina or Sabina Comfort cannot replace regular routine lifting from the sitting position using conventional mobile lifts such as Uno or Golvo. Instead, it is intended as an occasional solution when the user cannot actively manage a sit-to-stand lift. If the need for passive lifting from sitting persists, we recommend the use of Uno or Golvo.

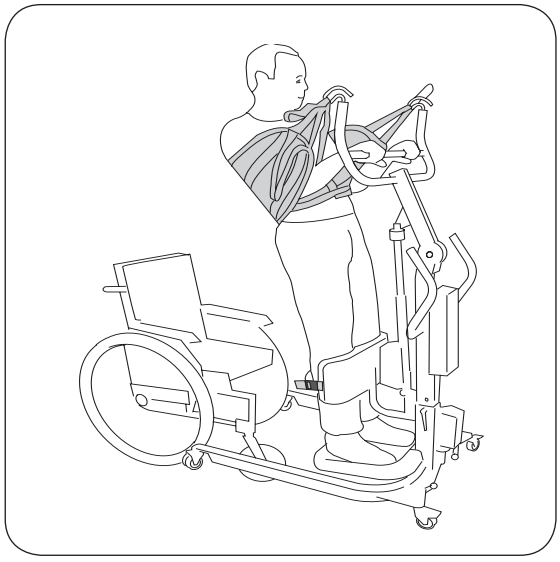
Sit-to-stand lifting with Sabina Comfort, with the active participation of the user



1. Place Sabina Comfort in front of the user and adjust the width of the undercarriage so that the feet can be placed centrally on the foot-tray with the shins parallel to the lower-leg supports. Adjust lower-leg support height and depth against the shins so as to achieve a comfortable resistance under the kneecap.

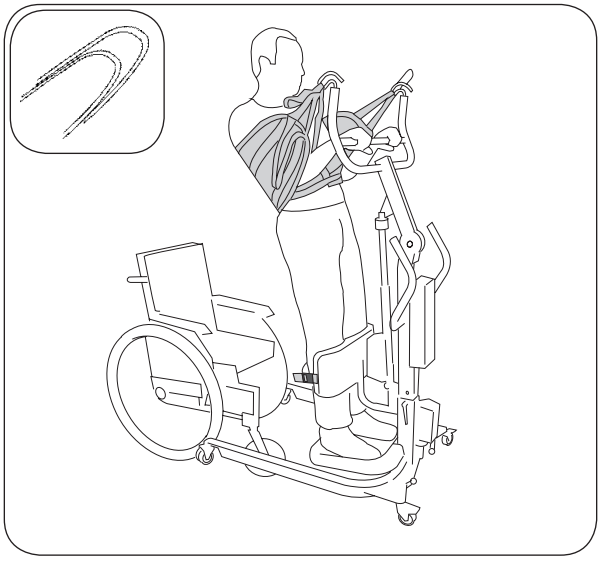


2. Place the sit-to-stand vest around the user according to the instructions for that particular vest.



3. Raise the lift about 10-20 cm (4-8 inch.) The user grasps the sling bar and the lifting procedure can continue. If the user leans backwards during the lift, this facilitates lifting and prevents the vest from sliding up. The height to which the user is to be lifted must be decided and tested in each individual case.

△ Make sure the vest's loops are correctly fastened when the straps are fully extended, but before the user is clear of the seat.



4. To achieve a more upright position, continue the lifting motion to the uppermost position. The lifting procedure may seem unpleasant for those who are unaccustomed to it. Remember that Sabina Comfort has two speeds. For maximum comfort, the mast must be locked into the base in the best possible of the three alternative holes. See page 6, illustration 2.

Troubleshooting Sabina and Sabina Comfort

The lift does not work up/down. Width adjustment does not work.

1. Check that the emergency stop button is not pushed in.
2. Check that the cables are connected correctly.
3. Check that the battery is charged.
4. Check that the battery contact plate is not defective or broken off.
5. Check that the charging cable is not connected to the wall socket.
6. *If the lift still does not work satisfactory contact Liko.*

Battery charging does not work.

1. Check that the emergency stop button is not pushed in.
2. Check that the battery contact plate is not defective or broken off.
3. *If the lift still does not work satisfactory contact Liko.*

The lift stops in the elevated position.

1. Check that the emergency stop button is not pushed in.
2. Check that the battery is charged.
3. Use the emergency lowering device. (marked).
4. *If the lift still does not work satisfactory*

contact Liko.

If you hear unusual sounds.

Contact Liko.

Care and Maintenance

For safe and troublefree operation, there are a few routine measures which should be performed every day the lift is used.

- Visually inspect the patient lift and check for external damage or wear.
- Check that all screws are tight.
- Check that the safety latches on the sling bar work properly.
- Check the hand control and the lift and width movements.
- Check the emergency lowering function.
- Charge the battery every night after use, or with the frequency needed.

If needed, clean the patient lift with warm water or ethanol. Warning! Do not use chemicals containing phenol or chlorine, since the aluminium parts may be damaged.

Sabina and Sabina Comfort should be thoroughly serviced at least once per year. Pay particular attention to parts that show wear, for example, joints, bolts, etc. Service must be carried out according to Liko service manual and by authorised staff.

> ⚠ ***WARNING!***
> Use *only* authorised Liko service personnel and Liko spare parts.

Transportation and storage
During transportation, or when the patient lift is not to be used for some time, the emergency stop button should be pushed in. Also, when storing, keep the patient lift at a temperature exceeding freezing point and at a relative humidity no more than 60%.

We always try to improve our products. Naturally, this means changes from time to time.
Please contact our local representative or your nearest Liko office to receive the latest updates.

Made in Sweden

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